

**Product:** Melanoma Inhibitory Activity Protein, human, recombinant  
**Catalog #:** 11-MIA-H  
**Amount:** 5 µg

**DESCRIPTION:**

Recombinant human Melanoma Inhibitory Activity Protein (rHuMIA). rHu MIA produced in E.Coli is a single, non-glycosylated, polypeptide chain consisting of 108 amino having a total molecular mass of 12237 Dalton. The Melanoma Inhibitory protein (MIA) was identified as an inhibitor of in vitro growth of malignant melanoma cells. The protein contains a SH3 domain. MIA acts as a potent tumor cell growth inhibitor for malignant melanoma cells and some other neuroectodermal tumors, including gliomas, in an autocrine fashion. In a study of human melanoma cell lines with different metastatic capacity MIA mRNA expression appeared to be inversely correlated with pigmentation. MIA has been shown to represent a very sensitive and specific serum marker for systemic malignant melanoma that might be useful for staging of primary melanomas, detection of progression from localized to metastatic disease during follow-up, and monitoring therapy of advanced melanomas. The rHuMIA is purified by proprietary chromatographic techniques. Agrees with the sequence of native human MIA with an addition N-terminal Methionine residue.

MGPMPKLADR KLCADQECSS HPISMAVALQ DYMAPDCRFL TIHRGQVVYV FSLKGRGRFL WGGSVQGDYY GDLAARLGYF PSSIVREDQT LKVDVKTDKW DFYQC  
*Escherichia Coli* expression system

**SOURCE:****PURITY:**

> 95%, as determined by:  
(a) Analysis by RP-HPLC.  
(b) Anion-exchange FPLC  
(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel

**ENDOTOXIN:****DIMERS & AGGREGATES:****PROTEIN CONTENT:**

Less than 0.1 ng/µg (IEU/µg) of rHuMIA  
Less than 1% as determined by silver stained SDS-PAGE gel analysis  
Protein quantitation was carried out by 2 independent methods:  
- UV spectroscopy at 280 nm using the absorption coefficient of 19300 M<sup>-1</sup>cm<sup>-1</sup>  
Purified, in 20mM Potassium phosphate pH 7 and 150 mM potassium chloride containing 0.1% BSA

**FORM:****CONCENTRATION:****STORAGE:****BIOLOGICAL ACTIVITY:**

0.1 mg/ml  
-20°C (aliquot), avoid freezing and thawing cycles  
rHuMIA is fully biologically active when compared to standard.  
The biological activity is calculated by the inhibiting effect on the invasion of Mel In Tumor cells (Bossertoff et al.2003 Lab Invest. 83, 1583-94) and found active in Mel In assay.

**REFERENCE:**

Blesch A et al. Cancer Research 54(21): 5695-5701 (1994)  
Bogdahn U et al. Cancer Research 49(19): 5358-5363 (1989)  
Bossertoff AK et al. Journal of Biological Chemistry 271(1): 490-495 (1965)  
Koehler MR et al. Genomics 35(1): 265-267 (1996)  
van Groningen JJ et al. Cancer Research 55(24): 6237-6243 (1995)

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